

What Is Claimed Is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding the HSF polypeptide having the amino acid sequence at positions from about -26 to about 353 in SEQ ID NO:2;

(b) a nucleotide sequence encoding the HSF polypeptide having the amino acid sequence at positions from about -25 to about 353 in SEQ ID NO:2;

(c) a nucleotide sequence encoding the amino acid sequence at positions from about 1 to about 353 in SEQ ID NO:2;

(d) a nucleotide sequence encoding the HSF polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731;

(e) a nucleotide sequence encoding the mature HSF polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731; and

(f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d) or (e).

2. An isolated nucleic acid molecule comprising a polynucleotide which hybridizes under stringent hybridization conditions to a polynucleotide having a nucleotide sequence identical to a nucleotide sequence in (a), (b), (c), (d) or (e) of claim 1, wherein said polynucleotide which hybridizes does not hybridize under stringent hybridization conditions to a polynucleotide having a nucleotide sequence consisting of only A residues or of only T residues.

3. An isolated nucleic acid molecule comprising a polynucleotide which encodes the amino acid sequence of an epitope-bearing portion of a HSF polypeptide having an amino acid sequence in (a), (b), (c), (d) or (e) of claim 1.

4. The isolated nucleic acid molecule of claim 3, which encodes an epitope-bearing portion of a HSF polypeptide selected from the group consisting of: a polypeptide comprising amino acid residues from about -26 to about -1 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 1 to about 26 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 56 to about 90 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 94 to about 106 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 112 to about 137 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 146 to about 181 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 191 to about 222 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 257 to about 266 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 293 to about 304 in SEQ ID NO:2; and a polypeptide comprising amino acid residues from and about 311 to about 351 in SEQ ID NO:2.

5. An isolated nucleic acid molecule comprising a polynucleotide having a sequence at least 95% identical to a sequence selected from the group consisting of:

(a) the nucleotide sequence of a fragment of the sequence shown in SEQ ID NO:1, wherein said fragment comprises at least 50 contiguous nucleotides of SEQ ID NO:1, provided that said nucleotide sequence is not SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, or any subfragment thereof; and

(b) a nucleotide sequence complementary to a nucleotide sequence in (a).

6. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.

7. A recombinant vector produced by the method of claim 6.

8. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 7 into a host cell.

9. A recombinant host cell produced by the method of claim 8.
10. A recombinant method for producing a HSF polypeptide, comprising culturing the recombinant host cell of claim 9 under conditions such that said polypeptide is expressed and recovering said polypeptide.
11. An isolated HSF polypeptide having an amino acid sequence at least 95% identical to a sequence selected from the group consisting of:
 - (a) amino acid residues from about -26 to about 353 in SEQ ID NO:2;
 - (b) amino acid residues from about -25 to about 353 in SEQ ID NO:2;
 - (c) amino acid residues from about 1 to about 353 in SEQ ID NO:2;
 - (d) the amino acid sequence of the HSF polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731;
 - (e) the amino acid sequence of the mature HSF polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731; and
 - (f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d) or (e).
12. An isolated polypeptide comprising an epitope-bearing portion of the HSF protein, wherein said portion is selected from the group consisting of: a polypeptide comprising amino acid residues from about -26 to about -1 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 1 to about 26 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 56 to about 90 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 94 to about 106 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 112 to about 137 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 146 to about 181 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 191 to about 222 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 257 to about 266 in SEQ ID NO:2; a polypeptide comprising amino acid residues from about 293 to about

304 in SEQ ID NO:2; and a polypeptide comprising amino acid residues from and about 311 to about 351 in SEQ ID NO:2.

13. The isolated polypeptide of claim 11, which is produced or contained in a recombinant host cell.

14. The isolated polypeptide of claim 13, wherein said recombinant host cell is mammalian.

15. An isolated nucleic acid molecule comprising a polynucleotide encoding an HSF polypeptide wherein, except for one to fifty conservative amino acid substitutions, said polypeptide has a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding the HSF polypeptide having the amino acid sequence at positions from about -26 to about 353 in SEQ ID NO:2;
- (b) a nucleotide sequence encoding the HSF polypeptide having the amino acid sequence at positions from about -25 to about 353 in SEQ ID NO:2;
- (c) a nucleotide sequence encoding the amino acid sequence at positions from about 1 to about 353 in SEQ ID NO:2;
- (d) a nucleotide sequence encoding the HSF polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731;
- (e) a nucleotide sequence encoding the mature HSF polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731; and
- (f) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), (c), (d) or (e).

16. An isolated HSF polypeptide wherein, except for one to fifty conservative amino acid substitutions, said polypeptide has a sequence selected from the group consisting of:

- (a) amino acid residues from about -26 to about 353 in SEQ ID NO:2;

- (b) amino acid residues from about -25 to about 353 in SEQ ID NO:2;
- (c) amino acid residues from about 1 to about 353 in SEQ ID NO:2;
- (d) the amino acid sequence of the HSF polypeptide having the complete amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731;
- (e) the amino acid sequence of the mature HSF polypeptide having the amino acid sequence encoded by the cDNA clone contained in ATCC Deposit No. 97731; and
- (f) the amino acid sequence of an epitope-bearing portion of any one of the polypeptides of (a), (b), (c), (d) or (e).

17. An isolated antibody that binds specifically to a HSF polypeptide of claim 11.

18. An isolated antibody that binds specifically to a HSF polypeptide of claim 12.